

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application and annexes to the International Preliminary Examination Report.

1. (Currently Amended) A composition for enhancing an immune response in an animal comprising:
 - (a) a virus-like particle;
 - (b) an immunostimulatory nucleic acid;wherein said immunostimulatory nucleic acid (b) is packaged within ~~is bound to~~ said virus-like particle (a);
 - (c) at least one antigen, wherein said antigen is mixed with or coupled to said virus-like particle (a); and
 - (d) at least one toll-like receptor (TLR) ligand;wherein said immunostimulatory nucleic acid (b) activates a TLR that is different than the TLR activated by the ligand (d).
2. (Original) The composition of claim 1, wherein said TLR ligand (d) is mixed with said VLP.
- 3-4. (Cancelled)
5. (Currently Amended) The composition of ~~any one of the preceding claims~~ claim 1, wherein said ligand (d) is a ligand for TLR 4.
- 6-9. (Cancelled)

10. (Currently Amended) The composition of ~~any one of claims 1 to 7 and claim 9~~
claim 1, wherein said immunostimulatory nucleic acid is an unmethylated CpG-
containing oligonucleotide.
- 11-13. (Cancelled)
14. (Currently Amended) The composition of claim 10, wherein the CpG motif of said
unmethylated CpG-containing oligonucleotide is part of a palindromic sequence.
15. (Original) The composition of claim 5, wherein said palindromic sequence is
GACGATCGTC (SEQ ID NO: 39).
16. (Currently Amended) The composition of claim 10, wherein said unmethylated
CpG-containing oligonucleotide comprises, ~~or alternatively consists essentially of,~~
~~or alternatively consists of~~ the sequence GGG GGG GGG GGA CGA TCG TCG
GGG GGG GGG (SEQ ID NO: 54).
- 17-32. (Cancelled)
33. (Currently Amended) The composition of ~~any of the preceding claims~~ claim 1,
wherein said immunostimulatory nucleic acid (b) is an unmethylated CpG-
containing oligonucleotide and wherein said ligand (d) is a ligand for TLR 1, 2, 3,
4, 5, 6, 7, 8, 10 or 11.
34. (Currently Amended) The composition of ~~any of the preceding claims~~ claim 33,
wherein said immunostimulatory nucleic acid (b) is an unmethylated CpG-
containing oligonucleotide and wherein said ligand (d) is a ligand for TLR4.
- 35-40. (Cancelled)

41. (Currently Amended) The composition of ~~any one of claims 1 to 38~~ claim 1, wherein said virus-like particle comprises recombinant proteins, or fragments thereof, of a RNA-phage, wherein said RNA-phage is bacteriophage Q β or bacteriophage AP205.

42-46. (Cancelled)

47. (Currently Amended) The composition of ~~claim 46,~~ claim 1, wherein said antigen (c) is isolated from a natural source, wherein said natural source is selected from the group consisting of:

- (a) pollen extract;
- (b) dust extract;
- (c) dust mite extract;
- (d) fungal extract;
- (e) mammalian epidermal extract;
- (f) feather extract;
- (g) insect extract;
- (h) food extract;
- (i) hair extract;
- (j) saliva extract; and
- (k) serum extract.

48. (Currently Amended) The composition of ~~any one of claims 1 to 44~~ claim 1, wherein said antigen (c) is derived from the group consisting of:

- (a) viruses;
- (b) bacteria;
- (c) parasites;
- (d) prions;
- (e) tumors;
- (f) self-molecules;

- (g) non-peptidic hapten molecules;
- (h) allergens; and
- (i) hormones.

49. (Cancelled)

50. (Currently Amended) The composition of ~~claim 49~~ claim 1, wherein said antigen (c) is a tumor antigen, wherein said tumor antigen is selected from the group consisting of:

- (a) Her2;
- (b) GD2;
- (c) EGF-R;
- (d) CEA;
- (e) CD52;
- (f) human melanoma protein gp100;
- (g) human melanoma protein melan-A/MART-1;
- (h) tyrosinase;
- (i) NA17-A nt protein;
- (j) MAGE-3 protein;
- (k) p53 protein;
- (l) HPV16 E7 protein;
- (m) an analogue of any one of the antigens from (a) to (l); and
- (n) antigenic fragments of any one of the tumor antigens from (a) to (m).

51. (Cancelled)

52. (Currently Amended) The composition of ~~claim 51~~ claim 1, wherein said antigen (c) is an allergen, wherein said allergen is derived from the group consisting of:

- (a) pollen extract;
- (b) dust extract;

- (c) dust mite extract;
- (d) fungal extract;
- (e) mammalian epidermal extract;
- (f) feather extract;
- (g) insect extract;
- (h) food extract;
- (i) hair extract;
- (j) saliva extract; and
- (k) serum extract.

53. (Currently Amended) The composition of ~~claim 51~~ claim 1, wherein said antigen (c) is an allergen, wherein said allergen is selected from the group consisting of:

- (a) trees;
- (b) grasses;
- (c) house dust;
- (d) house dust mite;
- (e) aspergillus;
- (f) animal hair;
- (g) animal feather;
- (h) bee venom;
- (i) animal products; and
- (j) plant products.

54. (Currently Amended) The composition of ~~any one of claims 1 to 44~~ claim 1, wherein said antigen (c) is selected from the group consisting of:

- (a) bee venom phospholipase A₂;
- (b) ragweed pollen Amb a 1;
- (c) birch pollen Bet v I;
- (d) white faced hornet venom 5 Dol m V;
- (e) house dust mite Der p 1;

- (f) house dust mite Der f 2;
 - (g) house dust mite Der 2;
 - (h) dust mite Lep d;
 - (i) fungus allergen Alt a 1;
 - (j) fungus allergen Asp f 1;
 - (k) fungus allergen Asp f 16; and
 - (l) peanut allergens.
55. (Currently Amended) The composition of ~~any one of claims 1 to 44~~ claim 1, wherein said antigen (c) is a cytotoxic T cell epitope, a Th cell epitope or a combination of at least two of said epitopes, wherein said at least two epitopes are bound directly or by way of a linking sequence.
56. (Cancelled)
57. (Currently Amended) A method for enhancing an immune response in an animal comprising introducing into said animal a composition comprising a composition of ~~any one of claims 1 to 56~~ claim 1.
- 58-62. (Cancelled)
63. (Currently Amended) A method ~~Use of a composition according to any of claims 1 to 56 or use of a vaccine according to claim 60 in the manufacture of a pharmaceutical~~ for the treatment of a disorder or disease ~~comprising, and preferably~~ selected from the group consisting of, allergies, tumors, chronic diseases and chronic viral diseases, the method comprising introducing into said animal a composition of claim 1.[.]
64. (New) The composition of claim 34, wherein said ligand (d) is LPS or a derivative thereof.